(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
19 July 2001 (19.07.2001)

PCT

(10) International Publication Number
WO 01/50933 A1

(51) International Patent Classification[7]: A47K 5/00, 5/18, A47D 15/00 // A47G 25/14

(21) International Application Number: PCT/NO01/00010

(22) International Filing Date: 12 January 2001 (12.01.2001)

(25) Filing Language: Norwegian

(26) Publication Language: English

(30) Priority Data:
20000177 13 January 2000 (13.01.2000) NO

(71) Applicant and
(72) Inventor: TELLEFSEN, Pia [NO/NO]; Svoldergt. 2, N-0271 Oslo (NO).

(74) Agent: PROTECTOR INTELLECTUAL PROPERTY CONSULTANTS AS; P.O. Box 5074 Majorstua, N-0301 Oslo (NO).

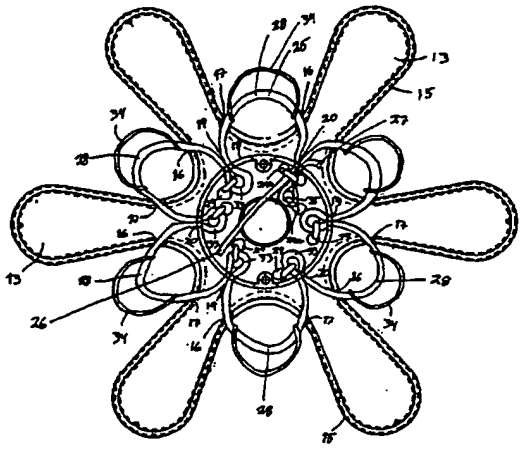
(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: HANGER DEVICE, IN PARTICULAR A HANGER DEVICE FOR HANGING UP VARIOUS TYPES OF CONTAINERS SUCH AS TUBES, PLASTIC BOTTLES AND SIMILAR



(57) Abstract: Hanger device for various sorts of containers, such as tubes, plastic bottles and similar, especially for baby care products, such as shampoo, skin lotion, baby ointment and similar. The device comprises a basic body (1) and a handle part (2). The basic body (1) is to be suspended via a longitudinal suspension body (4) and comprises a plurality of lobes (13) and a first wall (15) which extends along the outer edge of the lobes (13). Between adjacent lobes (13) a loop (28) is arranged, which is made of an elastic body (25), to hold a container. The elastic body (25) comprises a first end (26) and a second end (27). The elastic body (25) extends through slots (16) in the first wall (15) of one of the lobes (13) and through slots (17) in the first wall (15) of the other lobe (13), to form the loops (28). Inside of the first wall (15) is arranged at least one locking element (29) to prevent the elastic body (25) from slipping out through the slots (16, 17).

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Hanger device, in particular a hanger device for hanging up various types of containers such as tubes, plastic bottles and similar

The present application regards a hanger device, in particular a hanger device for hanging up various types of containers such as tubes, plastic bottles and similar, especially for hanging up baby care products such as shampoo, skin lotion, baby ointment and similar in proximity to a place of use, in accordance with the preamble of the following Claim 1.

From the applicants own Norwegian patent 177952 there is known a hanger device of the above mentioned type. Here, a number of arms are provided, which at the ends are equipped with hooks, fingers or loops designed to hold e.g. containers.

The applicant has also disclosed an improved version of this hanger device, in which is provided elastic band loops into which the containers are placed. In order to position the container, the elastic band is pulled out, the container is placed behind the elastic band, and the elastic band is released back into place around the container.

The applicant has however improved the hanger device further, in order to achieve improved performance, ease of manufacture and a more less costly product. This is achieved by the characteristics that appear from the characterising part of the following Claim 1.

The dependent claims state advantageous embodiments of the invention.

The invention will now be explained in greater detail with reference to an embodiment shown in the accompanying drawings, in which:

Figure 1 shows a hanger device according to the present invention;

Figure 2 shows a section through a handle component and a hook component for the hanger device according to the present invention;

Figure 3 is a top view of the handle component of the hanger device according to the present invention;

Figure 4 is a bottom view of the basic body of the hanger device according to the present invention;

Figure 5 shows a section taken along the line V-V in figure 4, of the basic body of the hanger device according to the present invention;

Figure 6 shows a section taken along the line VI-VI in figure 4, of the basic body of the hanger device according to the present invention;

Figure 7 is a bottom view of the basic body of the hanger device according to the present invention provided with an elastic band; and

Figure 8 shows a locking element according to the present invention, where

Figure 8a is an end view of the locking element;

Figure 8b is a first side view of the locking element; and

Figure 8c is a second side view of the locking element.

Figure 1 shows a hanger device according to the present invention. It generally consists of a basic body 1, a handle component 2 and a hook component 3. The basic body 1 is suspended e.g. from the ceiling via an extended suspension body 4 (indicated in broken lines), preferably in the form of a longitudinally adjustable body of the type used for certain ceiling lights, which has been termed an elevator. It is however also possible to use other bodies such as a telescoping bar.

Figure 2 shows the handle component 2 and the hook component 3. The handle component 2 consists of a tubular handle 38, a plate component 5 that is essentially

perpendicular to the handle 38, and a cover 6 that closes the top of the tubular handle 38. The hook component 3 consists of a cover component 7 that closes the bottom of the tubular handle 38, and a hook 8 by the lower end of the cover component 7.

Figure 3 shows the handle component 2 from above. As can be seen, the plate component 5 is generally star or flower shaped, with six lobes 9 that project from a middle section 10. At the centre of the middle section 10, the upper end of the handle 38 can be seen, here shown without a cover 6. Moreover, a plurality of screw holes 11 have been provided, which are designed to attach the plate component 5 to the basic body 1 by use of screws 23 (see Figure 2). A projection 12 is formed on either side of each lobe 9, which projection is designed to form a snap-in engagement with the basic body 1.

Figures 4, 5 and 6 show the basic body 1 from below. The basic body 1 also comprises six lobes 13 projecting from a middle section 14. The diameter of the lobes 13 is somewhat larger than that of the lobes 9 for the plate component 5. The basic body 1 also comprises a wall 15 that extends along the outer edge of the lobes 13. A slot 16 and 17 is formed in the wall by the inner end of each lobe 13, at the opposite side of the lobe 13. The significance of these slots will be explained in greater detail below.

A circular wall 18 has been formed on the middle section, projecting for the most part at right angles from the middle section 14. Slots 19 and 20 have been formed in the wall 18, the function of which slots will be explained in greater detail below. On the wall 18 are also bushes 21 for receiving the screws 23. A sleeve 22 is constructed centrally in the middle section 14, which sleeve is directed in the opposite direction of the wall 18 for connecting to the suspension body 4. The sleeve 22 has a female thread for receiving a connecting piece (not shown) with a complimentary thread on the suspension body 4.

By the edge of the wall 15, and on either side of each lobe 13, cutouts 24 are formed, which are complimentary to the projections 12 and designed to receive these when the basic body 1 and the handle component 2 are assembled.

In Figure 7, the basic body 1 is shown from the same side as in Figure 4. However, here an elastic element in the form of an elastic band 25 has been threaded into place in the

basic body 1. The elastic band 25 has a first end 26 and a second end 27. By starting at the first end 26 and going in a generally counter-clockwise direction around the basic body 1, the elastic band can be seen to be threaded out through one of the slots 20 in the wall 18, further out through the nearest of the slots 16 in the wall 15, in through the nearest of the slots 17, so as to form a loop 28 between the inner ends of the lobes 13. Furthermore, the elastic band is threaded through the nearest slot 19 in the wall 18. Immediately inside the wall 18, a locking element 29 is placed around the elastic band 25.

The locking element 29 is shown in detail in Figures 8a – 8c. It consists of two substantially parallel legs 30 and 31, which at one end are interconnected via a web 32.

The locking element 29 is placed over the elastic band 25 with one leg 30 and 31 on either side. The elastic band is then passed out again through the same slot 19 as the one it just came in through. One 30 of the legs of the locking element 29 is thereby left lying between a loop 33 in the elastic band and the slot 19. The thickness of the leg 30 is such that it, in combination with the transverse dimension of the elastic band 25, prevents the locking element 29 from being pulled out through the slot 19.

Further, the elastic band 25 is threaded out through the nearest slot 16 and then through the next slot 17, in order to form a new loop 28 between the slots 16 and 17. In this manner, the elastic band continues in the counter-clockwise direction around the basic body 1 until it is passed in through the slot 20 through which it first came out. Here, a locking element 29a is fitted, and the elastic band is passed back out through the slot 20 in a manner so as to form a loop 35 around one leg 30 of the locking element 29a. The elastic band 25 is thereby tripled through this slot 20, while it is doubled through the remaining slots 19 and 20. In order to prevent the end 26 of the elastic band 25 from being pulled out through the slot 29, a locking element 29b is also fitted over the triple elastic band that extends through the slot 20, immediately inside the slot 20. This exerts enough of a clamping force on the elastic band 25 so as to not allow the friction between the two parts of the elastic band to be overcome by a normal pull on the outside loop 28.

All of the locking elements 29 are arranged with the web 32 facing down towards the plate component 5 of the handle component 2. When the handle component 2 is assembled with the basic body 1, the plate component 5 will prevent the locking elements 29 from slipping off the elastic band 25. The elastic band 25 is thereby locked inside the basic body 1.

Alternatively, the elastic band 25 may be passed only through slots 16 and 17 in the wall 15, and the locking elements 29 may be located immediately inside of the wall 15.

On each of the loops 28 is a handle 34 in the form of a strip shaped element, the ends of which are provided with gripping means designed to grip the elastic band 25. The handle 33 is somewhat more rigid than the elastic band 25. The loop 28 may be pulled out by means of the handle 34, so that the elastic band 25 is stretched in this area, making room for the insertion of e.g. a container between the loop 28 and the wall 15 behind it. Thereafter, the handle 34 can be released, and the container is secured between the loop 28 and the wall 15 behind.

In the handle 38 of the handle component 2 and in the cover 7 of the hook component 3, a cavity 36 has been formed (see Figure 2). In order to first of all give the hanger device according to the present invention sufficient weight when empty, i.e. without containers, to allow a connected elevator to function correctly, and secondly to prevent the hanger device from tilting to one side when there are only containers suspended from one side of the basic body 1, the cavity 36 is filled with a weighting element, preferably steel shot (sand) 37. Steel shot has the property of being able to fill the cavity 36 well, of being relatively heavy, and of not moving very much when the hanger device is moved, thus creating very little noise.

The positioning of the steel shot 37 in the cavity 36 of the handle and the cover 7 ensures the lowest possible centre of gravity. For a hanger device that weighs approximately 3 kg when fully loaded with containers, it is therefore possible to achieve a satisfactory effect with only about 100 g of steel shot.

C l a i m s

1.

A hanger device, in particular a hanger device for hanging up various types of containers such as tubes, plastic bottles and similar, especially for hanging up baby care products such as shampoo, skin lotion, baby ointment and similar in proximity to a place of use, comprising a basic body (1) and a handle component (2), in which the basic body (1) is designed to be suspended via an extended suspension body (4); the basic body (1) comprising a plurality of lobes (13) and a first wall (15) that extends along the outer edge of the lobes (13), and in which a loop (28) made from an elastic body (25) in the form of an elastic band is provided between adjacent lobes (13) for retaining a container, c h a r a c t e r i s e d i n that the elastic body (25) comprises a first end (26) and a second end (27), that the elastic body (25) is passed out through slots (16) in the first wall (15) and back in through slots (17) in the first wall (15) in order to create the loops (28), and that at least one locking element (29) is provided inside the first wall (15), which locking element is designed to prevent the elastic body (25) from slipping out of the slots (16, 17).

2.

A device according to Claim 1, c h a r a c t e r i s e d i n that a second wall (18) is provided on the basic body (1) inside the first wall (15), and that the second wall (18) is provided with slots (19, 20) through which the elastic body (25) is also passed.

3.

A device according to Claim 2, c h a r a c t e r i s e d i n that the locking element (29) is arranged on the inside of the second wall (18).

4.

A device according to any of the preceding claims,

c h a r a c t e r i s e d i n that the locking element (29) is a generally U-shaped body comprising two legs (30, 31) that are interconnected via a web (32), that the locking element (29) is designed to be placed with one leg (30, 31) on

either side of the elastic body (25), in a manner such that a loop (33) of the elastic body stretches from the slot (19, 20) around one of the legs (30, 31) of the locking element (29) and back to the slot, and that the legs (30, 31) of the locking element (29) have a dimension that prevents the loop (33) of the elastic body (25) from passing through the slot (19, 20).

5.

A device according to one of Claims 2 - 4, c h a r a c t e r i s e d i n that the second end (27) of the elastic body (25) is passed through the same slot (20) as the first end (26), that the second end (27) is passed around a locking element (29a) in a loop, and that a further locking element (29b) is designed to retain the elastic body (25) by its first end (26) in engagement with the elastic body (25) by its second end (27).

6.

A device according to Claim 5, c h a r a c t e r i s e d i n that the further locking element (29b) is a generally U-shaped element that grips three layers of the elastic body (25).

7.

A device according to one of Claims 4 – 6, c h a r a c t e r i s e d i n that the locking element (29) is oriented with the web (32) towards the handle component (2), and that the handle component (2) is designed to abut the stay (32) with a plate component (5).

8.

A hanger device, in particular a hanger device for hanging up various types of containers such as tubes, plastic bottles and similar, especially for hanging up baby care products such as shampoo, skin lotion, baby ointment and similar in proximity to a place of use, comprising a basic body (1) and a handle component (2), in which the basic body (1) is designed to be suspended via an extended suspension body (4); the basic body (1) comprising a plurality of lobes (13) and a first wall (15) that extends along the outer edge of the lobes (13), and in which a loop (28) of an elastic body (25)

is provided between adjacent lobes (13) for retaining a container, c h a r a c t e r i s e d i n that the handle component (2) comprises a cavity (36) in which is provided a weighting element (37).

9.

A device according to Claim 8, c h a r a c t e r i s e d i n that the weighting element (37) comprises steel sand.

10.

A device according to Claim 8 or 9, c h a r a c t e r i s e d i n that the weighting element (37) has a weight of approximately 0.1 kg.

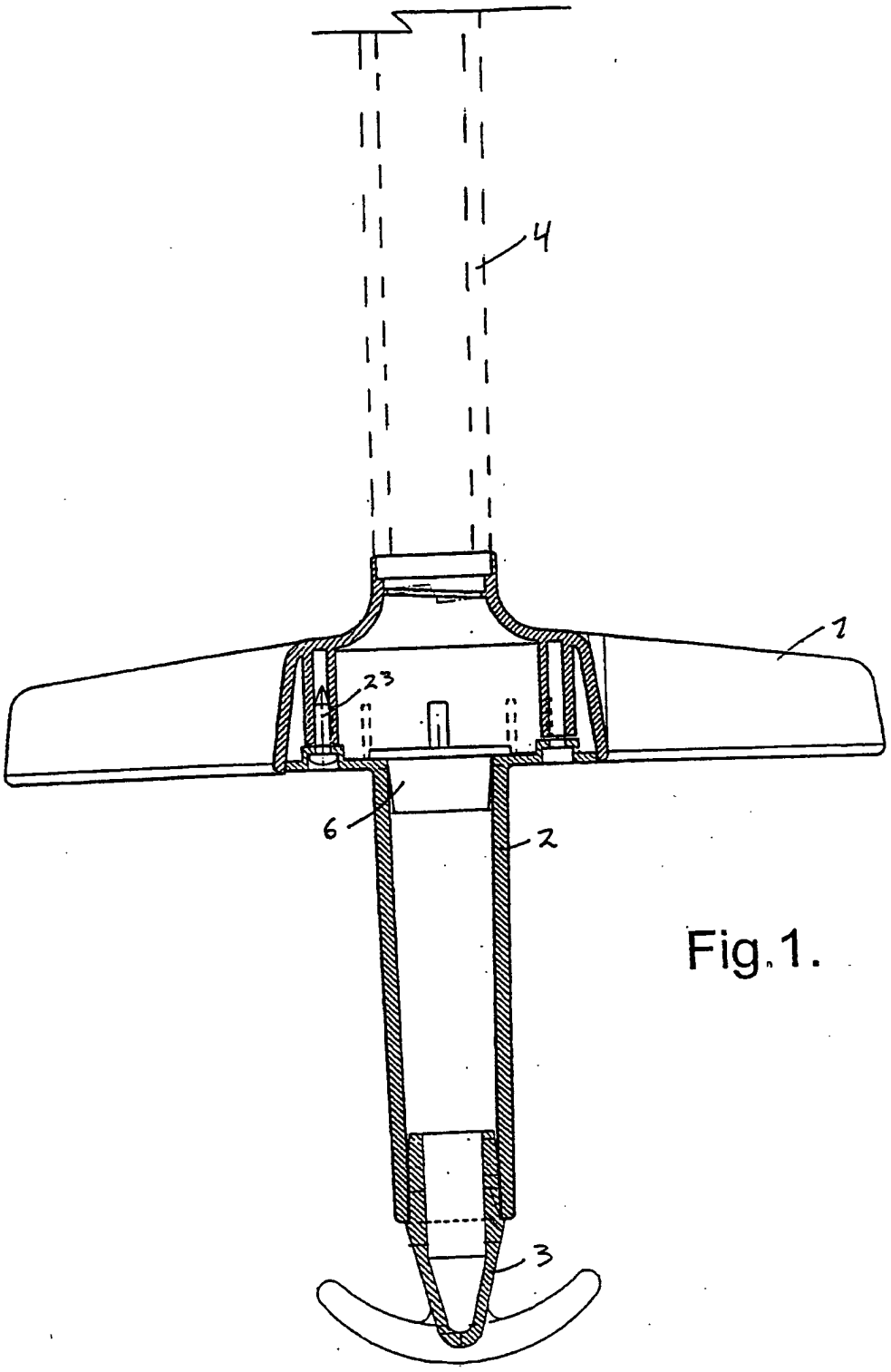

Fig.1.

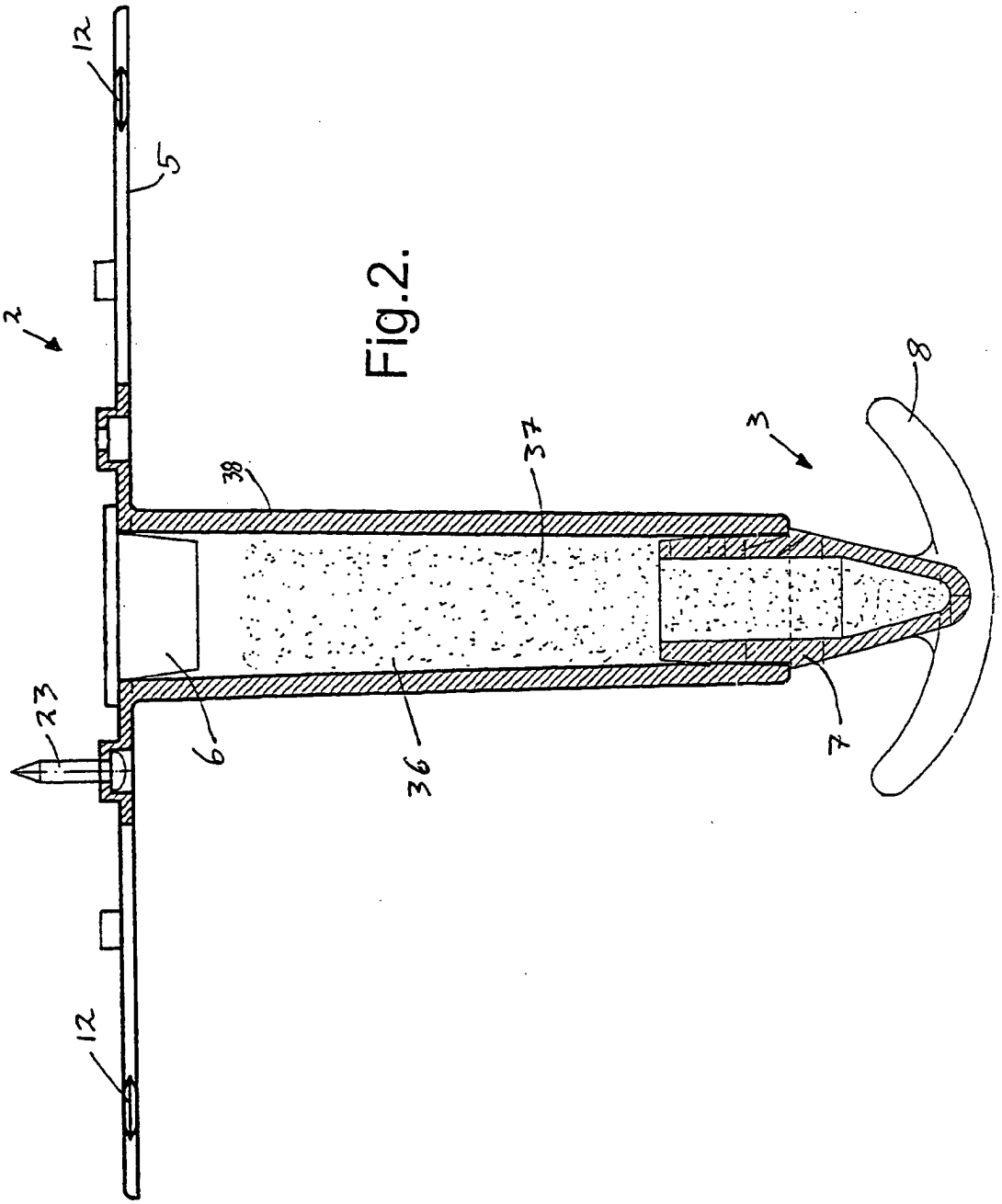

Fig.2.

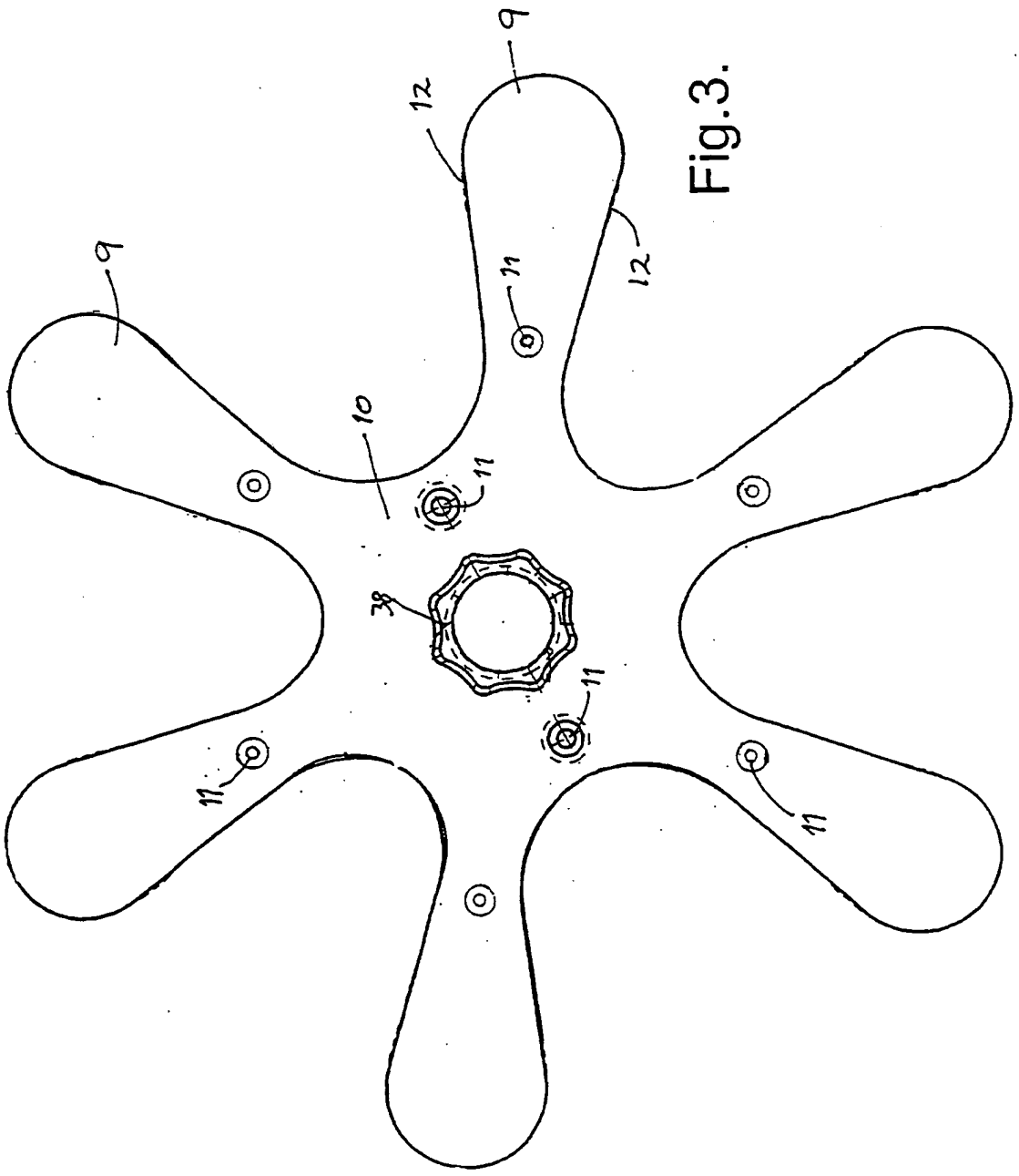

Fig.3.

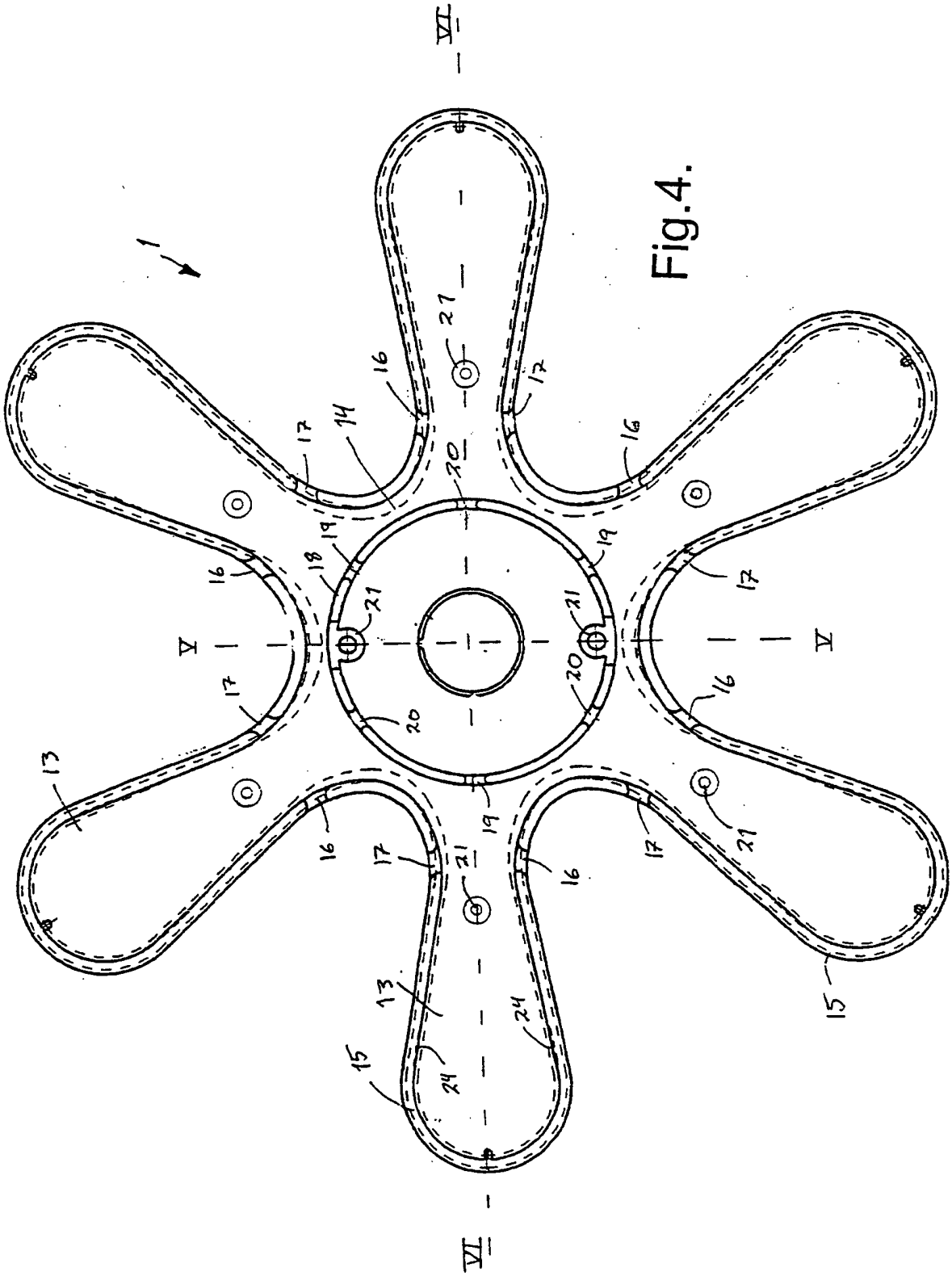
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Fig.4.

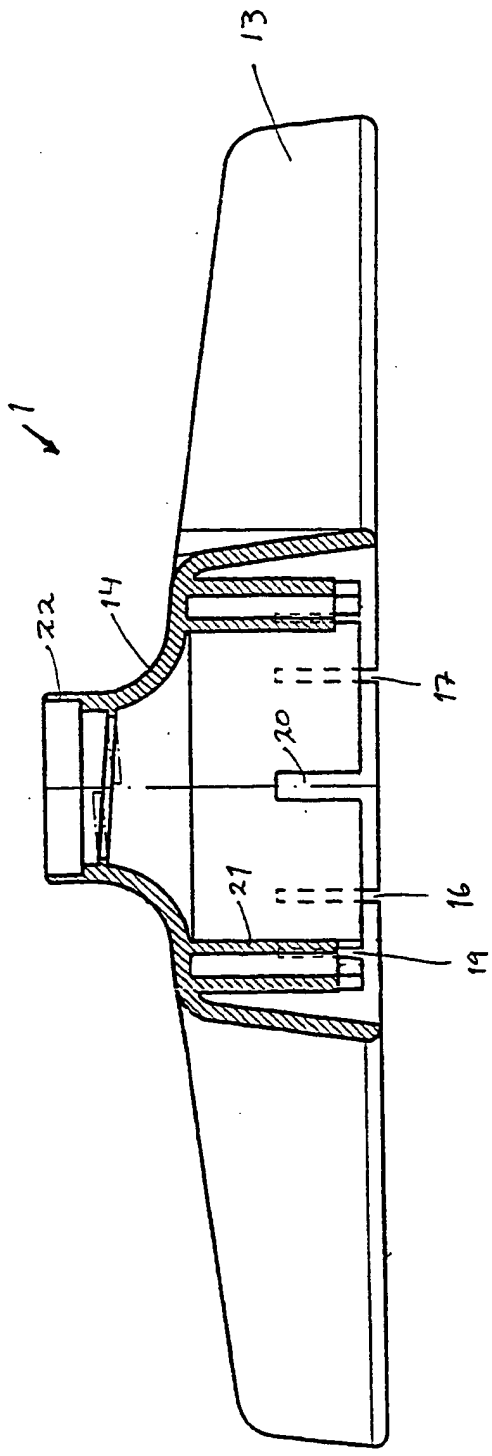


Fig.5.

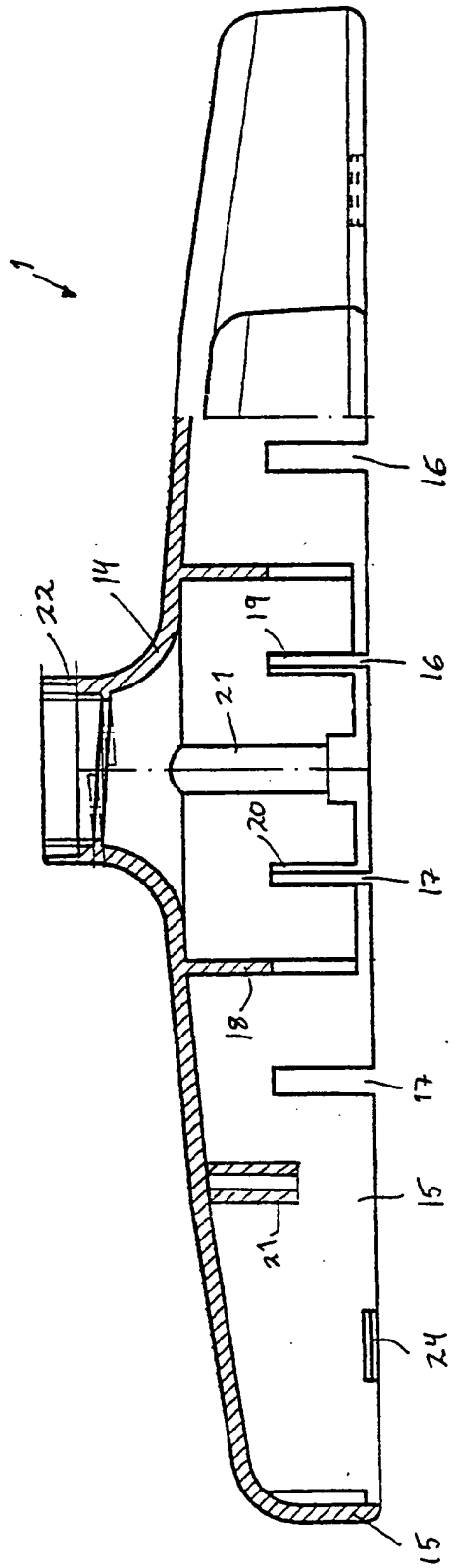
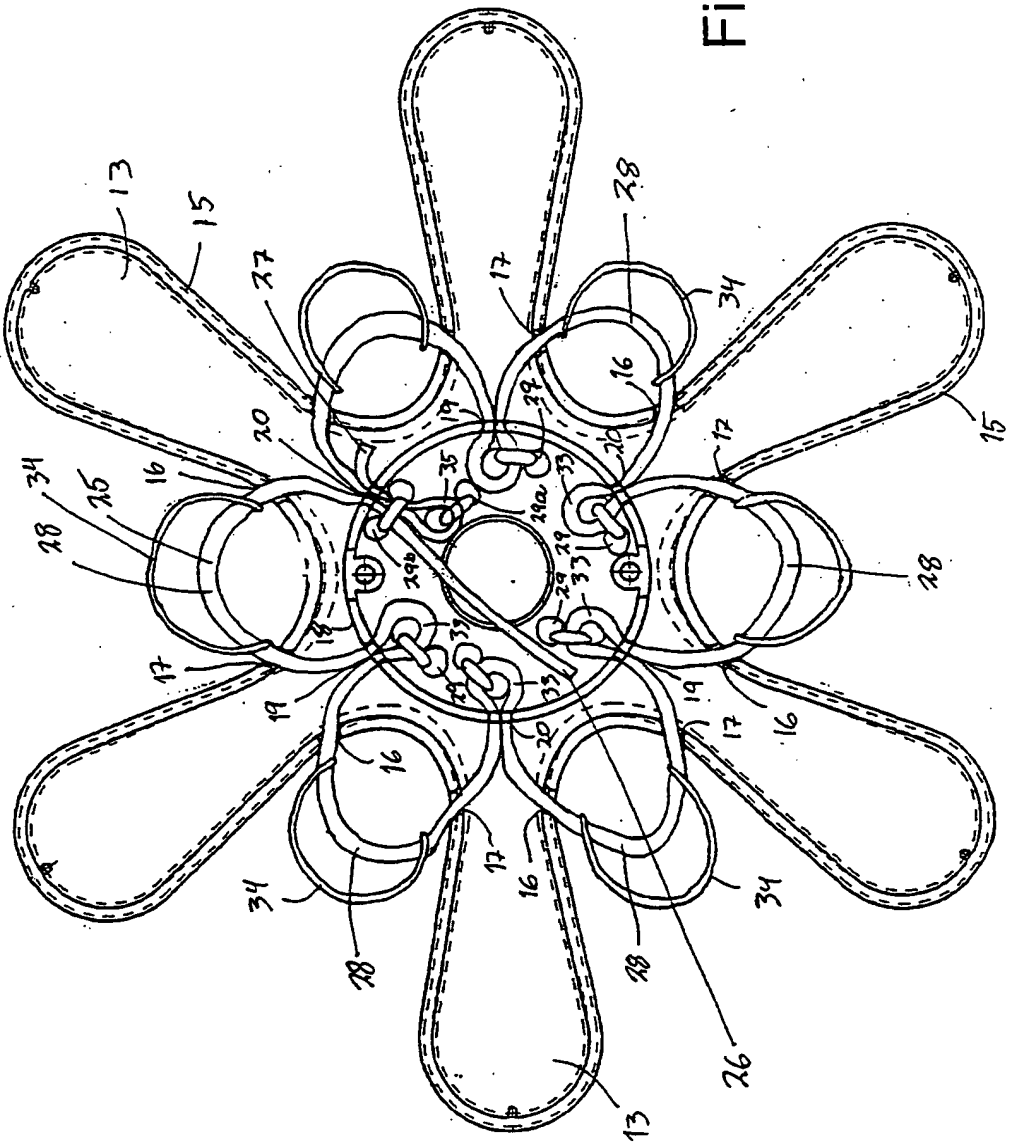


Fig.6.

Fig.7.



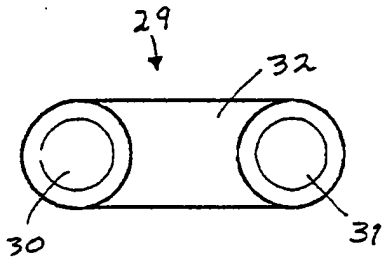


Fig.8A.

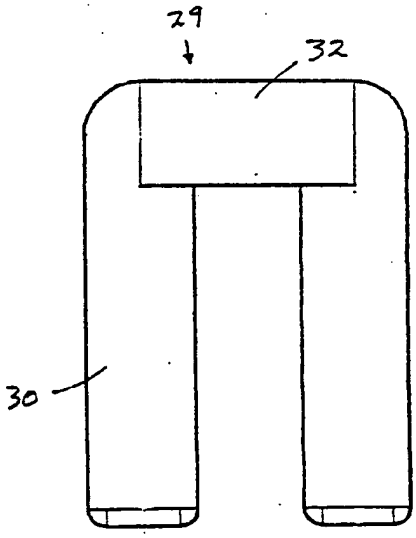


Fig.8B.

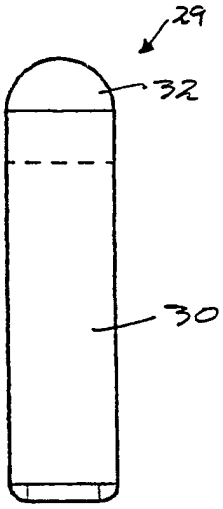


Fig.8C.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/NO 01/00010

A. CLASSIFICATION OF SUBJECT MATTER

IPC7: A47K 5/00, A47K 5/18, A47D 15/00 // A47G 25/14
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: A47K, A47D, A47G

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPI, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 9415517 A1 (TELLEFSEN, PIA), 21 July 1994 (21.07.94), see the whole document --	1-10
A	EP 0793934 A1 (NKG CO., LTD.), 18 February 1997 (18.02.97), figures --	1-10
A	SE 44284 C (K. KAMINSKA ET AL), 2 May 1917 (02.05.17), figures --	1-10
A	US 4343842 A (CHASE), 10 August 1982 (10.08.82), figures --	1-10

[X] Further documents are listed in the continuation of Box C. [X] See patent family annex.

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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
29 March 2001	17 -04- 2001
Name and mailing address of the ISA/ Swedish Patent Office Box 5055, S-102 42 STOCKHOLM Facsimile No. +46 8 666 02 86	Authorized officer Teija Kurki / JA A Telephone No. +46 8 782 25 00

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/NO 01/00010

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5873195 A (WORTHAM), 23 February 1999 (23.02.99), figures -- US 4770303 A (BOYD), 13 Sept 1988 (13.09.88), figures -- EP 0295844 A2 (MILLER, ANNE), 21 December 1988 (21.12.88), figures -- --------	1-10

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.
PCT/NO 01/00010

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SE 44284 C	02/05/17	NONE	
US 4343842 A	10/08/82	US 4248916 A	03/02/81
US 5873195 A	23/02/99	NONE	
US 4770303 A	13/09/88	NONE	
EP 0295844 A2	21/12/88	US 4778088 A	18/10/88